ACADEMY OF SCIENCES.

THE CLOSE OF THE SESSION.

THE MOST RECENT DISCOVERIES IN ACOUSTICS—A NEW MODE OF ANALYZING SOUNDS—THE MUSIC OF NEW-JERSEY MUSQUITOES INVESTIGATED—THE ANTENNÆ OF THE MALE MUSQUITO VIBRATE IN UNISON WITH THE NOTE OF THE FEMALE'S WINGS—DISCOVERIES IN FLUORESCENT SUBSTANCES BY PROF. MORTON — ADJOURNMENT OF THE ACADEMY.

The Academy of Sciences met yesterday, by invitation, at the Stevens Institute, Hoboken. The great facilities offered for experimental research by that institution make its vast halls, where every variety of modern scientific apparatus is to be found, an appropriate place for the meeting of such a body. It was whispered about among members that Prof. Mayer had some discoveries to tell of, which, while they added substantially to our scientific knowledge, were in themselves curiously interesting. With a ludicrous appropriateness of locality the discovery of an entire new class of facts respecting the musquito has been reserved for the labors of Prof. Mayer and the shores of Hoboken. Not a little merriment was occasioned, during the reading of the paper, by some verbal ambiguity in his description of the antennæ of the musquitoes on which he had operated, by which he was understood to state that the antennæ in question were precisely similar in dimensions to two pine rods two or three feet long. He subsequently "rose to explain" upon this point at the request of a member who expected to spend a night in New-Jersey.

NEW METHOD OF ANALYSIS OF COMPOSITE SOUNDS—BY PROF. ALFRED M. MAYER.

This paper enabled Prof. Mayer to exhibit an experimental confirmation of the theorem of Fourier as applied by him in his propositions relating to the nature of a simple sound, and to the analysis by the ear of a composite sound into its elementary pendulum-vibrations; and to show experiments elucidating the hypothesis of audition of Helmholtz.

If we represent any composite sound by a periodic curve, Fourier has shown and states in his theorem that such a curve can always be reproduced by compounding harmonic curves (often infinite in number) having the same axis as the given curve and having the lengths of their recurrent periods as 1, ½, ⅓, ¼ &c.

The above theorem is the statement of a mathematical possibility, and it does not necessarily follow that it can be immediately translated into the language of dynamics without experimental confirmation; for, as Helmholtz remarks, "That mode of decomposition of vibratory forms, such as the theorem of Fourier describes and renders possible—is it only a mathematical fiction, admirable because it renders computation facile, but not corresponding necessarily to anything in reality? Why consider the pendulous vibration as the irreducible element of all vibratory motion? We can imagine a whole divided in a multitude of different ways; in a calculation we may find it convenient to replace the number 12 by 8 + 4, in order to bring 8 in view; but it does not follow that 12 should be always and necessarily considered as the sum of 8 + 4. In other cases it may be more advantageous to consider the number as the sum of 7 + 5.

"The mathematical possibility, established by Fourier, of decomposing any sonorous motion into simple vibrations, cannot authorise us to conclude that this is the only admissible mode of decomposition, if we cannot prove that it has a signification essentially real. The fact that the ear effects that decomposition, induces one, nevertheless, to believe that this analysis has a signification, independent of all hypothesis in the exterior world. This opinion is also confirmed precisely by the fact stated above, that this mode of decomposition is more advantageous than any other in mathematical researches. For the methods of demonstration which agree with the intimate nature of things, are naturally those which lead to theoretic results the most convenient and the most clear."

But although Helmholtz thus states the importance of an experimental confirmation of this theorem, yet he did not attempt to test its truth by a course of rigorous experiments. This I have succeeded in doing, by the aid of a new method of sonorous analysis, which I will presently proceed to describe.

It is well known that if a surface advance regularly under a point of a body having a pendulum vibration in a plane parallel to the surface, this point will describe on the surface a sinusoidal (or as it is now more generally called) a harmonic curve. Ohm states that such a vibration, and only such, can produce on the ear the sensation of a simple sound—in other words, of a sound which has one and only one pitch. But the point of the sonorous body, whether it be a point of a membrane, of the drum of the ear, of the end of a vibrating rod, or of the air itself, may be actuated by a motion which, when it is caused to describe itself on the above-mentioned surface, may depart greatly in its form from the simple harmonic curve. Yet in this case, according to Ohm, the ear will act on this composite motion as the analysis of the mathematician can act on its corresponding curve, and will decompose it into the simple harmonic vibrations which compose it. Therefore the ear will, in this case, perceive several sounds, each having one definite pitch, and with the proper degree of attention can take cognizance of any one of them, to the exclusion more or less of all of the other components.

But if Ohm's proposition be true, then there must be a reason for it in the very dynamic constitution of the ear. This Helmholtz saw, and the discovery of the 3,000 cords of Corti in the cochlea and of Schultze's bristles in the ampulla led him to suppose that these bodies effected the analysis of the sound, vibrating with sympathetically its simple components. Thus he founded his theory of audition, which at once led him to his physiological theory of music as contained in his renowned work "*Die Lehre von den Tonempfindungen*," in which he reveals the hidden causes of musical harmony, which had remained for 2,000 years a secret and a problem to the mind of man. But many difficulties present themselves when we would bring to the test of experiment the propositions of Ohm and Helmholtz's ingenious hypothesis of audition. First, the complex sound on which we would experiment emanates from a multitude of vibrating points, and the points of the resultant wave surface differ in their amplitudes of vibration, while points equally removed from the geometric center of the wave differ in their phases of vibration, so that when such a wave falls at an angle on sympathetically vibrating bodies which present any surface, the effects produced are the results of extremely complex motions. The mind sees at once the difference between this complex conception and Ohm's simple statement of his application of Fourier's theorem. The only experiment, indeed, which Helmholtz adduces in support of his acoustical applications of Fourier's theorem is precisely in the condition of the relations we have just described, viz., that in which the cords of a piano are caused to vibrate sympathetically to the elements which may exist in the note we sing over the strings of the instrument.

As the mathematician in his analysis decomposes seriatim every point of the recurring curve into its elements, so the physicist, in confining the theorem of Fourier, should decompose into its elementary harmonic vibrations, the sonorous motions which such curve represents and indeed reproduces when it is drawn under a slit in a piece of paper which exposes only a point of the curve at once. To do this it is required that only one vibrating point of the body should be experimented on and that the composite vibratory motion of this point should be conveyed along lines to bodies vibrating sympathetically to the elements of the composite vibration, and that these sympathetically vibrating bodies should be capable alone of giving simple or pendulous vibrations.

It is evidently impossible to subject to experiment the interior portions of the ears of mammalia, and we must therefore study the progress of the change in the position of the inner ear as we descend in the scale of life, so that if possible we may at last find animals whose external ear is exposed to view. It appears, if one so ignorant of zoölogy may advance an opinion, that as we descend from the mammalia in the scale of life the exterior parts of the ear disappear and the interior portions advance toward the surface.

After this introduction Prof. Mayer gave an account illustrated with elaborate experiments, of a recent research on the analysis of composite or musical sounds, and detailed experiments on the organs of hearing of insects, or what are supposed to be organs of hearing.

After having first shown experimentally all the existing methods of the analysis of sound by taking one after another the elementary notes out of a reed organ pipe by the former known methods, he proceeded to analyze the same sound given by the reed organ pipe by his own method. Prof. Mayer's method is as follows: A membrane is placed near the sonorous body. Attached to a point of this membrane are several fibers from a silk worm cocoon. Each of these leads to a tuning fork. Now, it is known that a tuning fork can only give a simple sound, that is, a sound having only one pitch. Hence if any of the sounds which are given by these forks exist in the sound given by the sonorous body, the forks giving those sounds, and only these, will vibrate. Prof. Mayer showed this by placing on the prongs of the forks small pieces of wax. This system of analysis is found to be so delicate that if the fork is thrown out of tune by the weight of the piece of wax, so that it will give one beat in eight seconds with the sound which it had before it was loaded, it will thus detect this difference in the pitch. According to Weber of Germany, the most accomplished musical ear can detect a difference of pitch in two notes whose ratio of vibration is as 1,000 to 1,001; but by this method a difference of pitch can be detected in two notes where the ratio of vibration is 4,000 to 4,001.

Prof. Mayer then gave an account of experiments in which he has partly succeeded in measuring the relative intensity of sounds by the quantity of heat that sounds give when the bodies producing them are caused to send their vibrations into india-rubber. The rubber is in the form of a very thin sheet stretched between the prongs of a fork, and inclosed on the sides by a thermo-battery. Prof. Mayer is still conducting researches in this direction. Unless we can measure the intensity of sounds there is no science of acoustics. Last year Prof. Mayer made an initial step in that direction by measuring with great accuracy the relative intensity of sounds of the same pitch. But to measure the relative intensity of sounds of different pitch is a much more difficult matter, and has not yet been successfully accomplished. Prof. Mayer, however, hopes to succeed in this by converting a certain known fraction of a sonorous vibration into heat.

Prof. Mayer now exhibited to the Academy the resultant curve produced by combining the first six harmonics of a musical note. This curve was then drawn in a circular disc of glass by removing from its blackened surface the continuous line of the curve, which returned on itself. This curve was now placed in front of a lantern, and the image of the line was projected on a screen. A slit in a piece of card-board having been placed in front of the curve, and in the direction of a radius of the disc, and the disc being revolved, caused the spot of light on the screen to vibrate like the drum of the ear when it listens to a musical note. This experiment, from its novelty and interest, elicited great applause.

Prof. Mayer then proceeded to give an account, illustrated by experiment, of what he supposes to be the organ of hearing in insects. Placing a male musketo under the microscope, and sounding various notes of tuning-forks in the range of a sound given by the female musketo, the various fibers of the antennæ of the male musketo vibrated sympathetically to these various sounds. The longest fibers vibrated sympathetically to the grave notes, and the short fibers vibrated sympathetically to the higher notes. The fact that the nocturnal insects have highly organized antennæ, while the diurnal ones have not; and also the fact that the anatomy of these parts of insects shows a highly developed nervous organization, leads to the highly probable inference that Prof. Mayer has here given facts which form the first sure basis of reasoning in reference to the nature of the auditory apparatus of insects.

These experiments were also extended in a direction which added new facts to the physiology of the senses. If a sonorous impulse strike a fiber so that the direction of the impulse is in the direction of the fiber, then the fiber remains stationary. But if the direction of the sound is at right angles to the fiber, the fiber vibrates with its maximum intensity. Thus, when a sound strikes the fibrils of an insect, those on one antenna are vibrated more powerfully than the fibrils on the other, and the insect naturally turns in the direction of that antenna which is most strongly shaken. The fibrils on the other antenna are now shaken with more and more intensity, until, having turned his body so that both antennæ vibrate with equal intensity, he has placed the axis of his body in the direction of the sound. Experiments under the microscope show that the musketo can thus detect to within five degrees the position of the sonorous center. To render assurance doubly sure, Prof. Mayer having found two fibrils of the antennæ of a musketo which vibrated powerfully to two different notes, measured these fibrils very accurately under the microscope. He then constructed some fibrils out of pine wood, which, though two or three feet long and of the thickness of small picture-cord, had exactly the same proportion of length to thickness as the fibrils of the antennæ of the musketo. He found that these slender pine rods or fibrils had to each other the same ratio of vibration as the fibrils of the musketo.

Prof. Henry said: The Academy has been highly interested in these beautiful experiments. To make experiments, to reproduce what others have done, requires peculiar talent and much experience; but to go into the unknown requires talents of a high order. Prof. Mayer has shown us that he possesses these talents, and we hope for him a long career of usefulness and successful results.

REMARKABLE FLUORESCENCE IN NEW CHEMICAL COMPOUNDS—BY PROF. MORTON OF THE STEVENS INSTITUTE, HOBOKEN.

In response to the kind invitation which I received only yesterday morning from the Academy of Sciences to present to them some of the results of the investigations which have occupied me for some months past, I have hastily arranged a few things and propose to give a very brief resumé of some of this work, illustrating a few of the results.

The research has consisted in studying at the same time the fluorescence and the absorption spectra of various bodies, including the uranium salts, the organic substance anthracene, and some of its derivatives, and a new body which I was fortunate enough to discover by the application of this method to products of the distillation. The material on which I operated was given to me in the first instance by Prof. Hosford, which was a small specimen. I was afterward able to obtain through Dr. Barker an introduction to Mr. Truax, who gave me large quantities. The methods of observation I have employed have not differed essentially from those usually adopted. Little points of arrangement have been added and modified; but the good results have been because of the extent of the ground gone over and the assistance of my friend Dr. H. C. Bolton and Mr. Carr, who enabled chemical knowledge and skill to be brought to bear on the study of physics, while physical knowledge could be added to chemical analysis. Becquérel has done a great deal of work in this direction, but through inattention to the chemical considerations involved has been so far misled that he has failed to obtain results which might have been reached if he had operated with pure materials or known perfectly what he was dealing with. Thus he supposed he was examining one material only, when it has been found that he was dealing with more than one, not knowing that the chemical substance was impure.

In my experiments a *porte lumière* is placed in a shutter facing the south. We get the best of the sunlight in our climate in the early part of the day. The light so entering is allowed to pass directly through a lens of about 12-inch focus, and in front of this is placed a little tank containing an ammoniacal sulphate of copper. This filters the light of all but the pure blue and violet rays. These rays then fall by the focalizing action of the lens mentioned, upon the objects to be studied or observed, which are placed in a little stand, in vials. The stand contains eight stalls for holding vials, the whole rotating with a click, so that when we have one in a proper position for observation we can move another to the same place without moving the stand. This has enabled me to note coincidences which would be difficult to confirm if any notable time had elapsed between the observation of different substances.

Taking the matter historically, the first substance studied thus was anthracene. By a series of observations it was pretty clearly demonstrated that the spectrum which had been seen before, though not thoroughly studied by Becquérel and assigned to this substance, was really due in part to a material present in all commercial anthracene, and named chrysogen. In a further examination of this class of materials, I succeeded in isolating from them a material in many points resembling anthracene. It however differs from that body in its chemical reactions in a very marked way. It will not react like anthracene with chlorine, bromine, or sulphuric acid. Besides, in combining with picric acid it takes twice as much acid to form a compound as does anthracene. Its spectrum is also perfectly distinguishable from that of anthracene or chrysogen; but its ultimate chemical composition seems to be identical with anthracene, of which it is probably an isomer. The latter fact has been confirmed by some hasty analyses of Dr Barker in which he had not sufficient confidence to permit their publication, and by a more complete examination obtained through Dr. Bolton of Berlin, who employed one of the best chemists of Germany.

Its remarkable power of fluorescence is the most interesting property of this new body. When actinic light is allowed to fall upon it, it excites it in a manner not comparable to any substance with which I am acquainted. When a continuous spectrum is thrown up from it, it is banded. The absorption spectrum is also remarkable. One other point is that if a strong solution of it is placed in bright sunlight, being kept hot, so as to maintain the solution, the substance undergoes a definite change as regards its reactions, and with reference to its fluorescence we find its fluorescent spectrum has all its bands moved upward to a higher point in the spectrum. As a natural consequence, we find that it gives a blue light by fluorescence, in place of the green light which the subject in its normal condition gives. To this substance in the condition in which it is first produced I have given the name Thallene, from the brilliant green color of its fluorescence. To the modified state I have given the name of Petrolucene, alluding to its brightness and derivation from petroleum.

This method of examination proved of great value with the salts of uranium. Differences in the state of hydration, which could not well be determined in any other way, could be instantly recognized by the change in the fluorescent spectrum. It is demonstrable that the differences between different salts are not greater than between different hydrates of the same salt. It becomes practicable to follow changes in hydration that would not be perceptible by any other means. First we heat a salt and examine it from time to time as regards its fluorescent spectrum. We find first a definite spectrum. After it is heated and has lost a little water we find a new spectrum beginning to present itself, superimposed upon the first. We go on heating and drying; the first set of lines grows fainter and fainter, and at last disappear; and the new set remain masters of the field. Weighing will then tell us that we have lost one, two, three atoms of water. It is no haphazard matter. We can tell what we have lost by the spectroscope, and we can tell what changes have taken place. This also enables us to recognize the presence of impurities or mixtures in our salt. Certain general rules are found which enable us to tell at once to what class the salt belongs. Thus we can tell whether an acetate is a single or a double acetate by a simple investigation of the spectrum. Prof. Morton mentioned a number of instances where long and difficult chemical processes were superseded by this prompt method of ascertaining at once whether the salt under consideration was a single or a double salt, and what its constituents were.

By using the absorption spectrum in the study of the double salts, it is found that when these double salts are in solution they give a spectrum indicating separation. When a double salt is dissolved it ceases to be the double salt. Thus if we have a double acetate of uranium and sodium, it breaks up in solution into acetate of uranium and acetate of sodium, each of these taking an equivalent of water to combine. The atomic weight of water is very small; the active uranium particle will only be lodged with a small and active atom of water. If we look into the chemical composition of these substances—take, for instance, acetates of sodium and lithium—to find which is the lightest next to water, we find the sodium is, because the lithium acetate contains eight or nine atoms of water, while the sodium salt is anhydrous. We find the lithium salt is a little heavier than the sodium salt; but the lithium salt comes in the composition of its bands very near to the sodium. If we thus tabulate the composition of the bands of a great number of bodies, starting with the acetate of uranium and then the others we shall arrange a column which almost accurately is in the order of the atomic weights of the substances, if we bear in mind the water atoms which are necessary to the existence of the salts. The bands are brought down to the longer wave-lengths by the addition of extra weight of atoms of water. This rule seems to be carried out by observation, and certainly points to a very curious branch of physical inquiry.

It can also be shown that hydration may exist in solution; as Gladstone has shown by a totally different series of observations. Dr. Morton has pushed this class of observations through all the uranium salts known and many that have never before been made. Some of these new salts were described, and one of them—a discovery of Dr. Morton's—the ammonio-diuranic sulphate, was the subject of an extended description. Had we depended on chemistry alone, the ammonio-diuranic sulphate would never have been discovered. We regret that we cannot give space to particulars about the sodio-uranious fluoride, and the potassio-uranious fluoride; but the first-named of these substances has been shown not to be possessed of a separate existence, by the methods of Dr. Morton.

Several brilliant experiments were then exhibited: that of the fluorescence of thallene being of remarkable splendor. At the close Prof. Henry expressed the thanks of the Academy for the address of Dr. Morton, and spoke of the value of the Stevens Institute in providing the means of original research which have been so admirably improved.

Prof. R. H. Taurston invited the members to an exhibition of torsional resistance of materials determined by a new apparatus with automatic registry. A reception given to the members of the Academy by Mrs. Stevens of Hoboken proved a very enjoyable affair. The Association adjourned to meet next year in Washington.

A RAINY DAY AT PENIKESE.

THE SCHOOL AT ITS WORK.

AN ENFORCED STAY ON THE ISLAND—THE STUDENTS AND PROFESSORS AND THEIR METHODS OF WORK—STUDIES WITHOUT BOOKS—A THEOLOGICAL DISCUSSION—AGASSIZ'S DISBELIEF IN DARWIN AND DARWIN'S RETALIATION.

[FROM AN OCCASIONAL CORRESPONDENT OF THE TRIBUNE.]

PHILADELPHIA, Oct. 24.—The Anderson School of Natural History at Penikese, inaugurated but a few months ago, and now closed for the season, is already a famous institution. The fact that a seaside laboratory devoted to the study of living forms was to be founded, proved in itself sufficient to awaken a wide spread interest, for no similar experiment had ever been attempted; and when in addition to this the friends of education were informed that the directorship had been intrusted to one of the most famous zoölogists of his time, its success was assured. Prof. Agassiz entered into his work with his usual enthusiasm. He was ably assisted by Count Pourtales of the U. S. Coast Survey, Dr. J. S. Packard of the Peabody Institute, Prof. Burt G. Wilder of Cornell University, Mr. Waterhouse Hawkins of Sydenham Palace fame, Mr. Bicknall the microscopist, and others.

In a little ravine between the two hills the island of Penikese can boast is the quondam Summer residence of Mr. John Anderson, which served as the private quarters of Prof. Agassiz and his assistants. It is an unpretending structure of frame, with a pretty lawn sloping to the east, ornamented with a little group in iron of a boy and swan. Behind the house stands the barn, used last Summer as a dining-hall, and near by are the laboratories. These are two barrack-like structures, united at their midway by a third much shorter one. It is in the design to use both of the main buildings for laboratories and dormitories, reserving the smaller one as a lecture-room. At the time of my visit, last Summer, but one of the buildings was in use.

I shall endeavor to describe the scene just as it was presented to me. Entering by a side door I find the institution in "full tide of successful experiment." Arranged along the side of the room are numbers of small but firm tables; in the middle of the room stand aquariums; on the walls, diagrams; suspended from the ceilings are dried tissues of various animals; running entirely around the room is a single shelf, appropriated for bottles of specimens. At one end of the apartment is a huge black-board, with a hopeless arabesque of colored chalk marks thereon, and at the other, shelves for books, and cases of alcohol. What earnest groups are there about the tables! Men and women engaged in study—teachers themselves, now pupils. But few books are seen, for their use is discouraged. I notice among those on the tables Harvey's "Marine Algæ," Packard's "Entomology," and Agassiz's "Methods." I wander at will from table to table, overlooking the workers.

After dinner, the students reassemble. This time to listen to a lecture from Prof. Agassiz. He delivers an eloquent discourse on Types of Animal Life. He speaks without notes; uses few gestures. He tells us of the varying standards for comparison in different groups of animals, their distinctness—of their immutability. In the Batrachia, that is, the group of animals having a tadpole stage, this standard is obtained by the study of their development. But in the reptiles it is otherwise, for here, in place of development, which is an indifferent standard, we must take a comprehensive view of all the structures. Other animals, such as some of the fishes, do not reveal their type in its perfection, but continually remind us of something higher yet to come. There are prophetic types; for while some fishes, as the sturgeon and the gar, remind us of reptiles, others again, as the sharks, hint of forms yet higher than the reptiles. viz., those having social instincts and which retain their young in close relation to their own tissues. The Professor became warmed up as he alludes to the doctrine of evolution. "Some," cries he, "would have us develop the *Amphiorus* (fish) from an *Ascidian* (mollusk)—two utterly remote types. This is worse than an absurdity—it is a lie!" It would give Darwin a new sensation to hear this. After the lecture, more looking into dishes and more off-hand table demonstrations and explanations. Then supper and darkness. After supper the horn gave another toot. "What now, boy?" "Lecture this evening, sir!" And now, as a closing exercise of the day, we have a fine stereopticon exhibition by Mr. Bicknall, of corals, insects, and injections.

The following day, Thursday, dawned gray and desolate; beating winds and pelting rain. The sea, even in the haven between the islands, was full of angry caps. A heavy surf beat the shore, and the air was filled with flying scum. No getting away to-day, so indoors again. It is an ill wind that blows no one good. While a prisoner at Penikese, I was the witness of a scene on that rainy Thursday which will never be forgotten by those present. It was historic of two things—of the first rainy day at Penikese, counting its birth as an institution, and of the first recorded meeting of the friends of Natural Theology. How the former came about, "Old Probabilities" has told us. How the latter, perhaps no one can tell. The spirit of the chronicle is as follows: About the middle of the forenoon, the hour announced that a lecture would be delivered—this time by Prof. Wilder—on the "Structure of Fishes," the wind was blowing fiercely about the buildings, and the rain was beating steadily against them, keeping up a constant clatter against the window-panes. In strange contrast to this outside commotion, was gathered a little audience of perhaps 50 persons of both sexes. Their ages ranged from 25 to 45—earnest, eager, all above the average in native intelligence.

Prof. Agassiz informs the class that Prof. Peirce of the Coast Survey, at present a guest of the School, has consented to address them prior to the lecture. Prof. Peirce is on his feet, to show by example the value of discussion. "The greatest general truths," said he, "had always resulted from the clash of opposing theories. All that was needed was the eager following of truth as each one saw it. In the history of geology Prof. Agassiz has told us that from the discussions of the Neptunists and the Plutonists have arisen a more thorough knowledge of the scope of the agency exerted by water and fire in the formation of the earth's crust than would have been possible without that stimulus." He, in addition, spoke of the lasting good resulting to the study of logarithms by the contentions between the French and German mathematicians over a trivial subject apparently, viz.: Which was the better sign, the letter e, or the letter h?

Some one in the class here suggested that the same kind of good to natural history might result from debates between the evolutionists and the non-evolutionists.

"Well," replied Agassiz, rather evasively, "personally I like Mr. Darwin very much; he is my friend."

Here a cluster of pupils began making merry.

"What is it? Let us have it!"

A Voice—"Darwin's son Frank was once told that Agassiz did not accept evolution. 'That's all right,' said Frank; 'father does not believe in the glacial theory.'" [Laughter.]

"Well, now," said Agassiz, turning to Prof. Wilder, "Dr. Wilder, give us some fish."

But no, we were doomed to go without that course to our feast.

Dr. Wilder arose—a prompt, nervous man, with a crisp, well modulated voice. "Prof. Agassiz," he began, "is the director here, and when he says anything is to be done, it is done. But I must confess that, after listening to the delightful exercises of this morning, I have become rebellious, and I *won't* say anything about fish." [Laughter.]

The Doctor then went on to say how he had been reflecting on the subject of freedom of thought as a necessity to true progress, and deemed it a fit occasion to have the position of the scientific world with respect to the theological world fairly defined. He then boldly launched out into the field of the relations between natural and revealed religions. He contended that there should be no compromise. The Bible and Nature stand confessed as the revelations of the one God, and, moreover, it was never intended they should conflict.

I cannot follow him, nor the remarks which his address called forth. The occasion had become a solemn one. A long silence ensued after this last topic, which had grown so naturally out of the first address of Prof. Peirce. Each one was apparently thinking the same thought, drinking in the same influence. I felt as well as others present, while the storm beat about us, as one withdrawn from the world for a time. As I now write of that scene, its truth and beauty return in all their force.

Whatever may be the proper sphere of woman, horse stealing is scarcely a pursuit in which she can engage without losing something of the charms for which the sex has heretofore been admired. At any rate, she may lose her life, as Mrs. Nancy Hill has. She was the celebrated Texas horse-thief and ranger, and passed her energetic existence in appropriating the private steeds of her fellow-citizens. In consequence of this industry and enterprise she was found lately near Denver Creek gracefully dangling from one of the branches of an oak tree. Notwithstanding her name, there was nothing Miss-Nancy-ish about her career, but the lynchers were too many for her. The age of chivalry in Texas has not yet arrived.

JOINT COMMUNION.

AN OPEN LETTER TO BISHOP CUMMINS.

THE REV. MR. DRUMM ATTACKS BISHOP CUMMINS'S AUTHORITIES—MARTYR AND BUCER NOT PRESBYTERIANS AND NEVER ADMITTED TO PARISHES.

To the Right Rev. GEORGE DAVID CUMMINS, D. D., Assistant Bishop of Kentucky.

RIGHT REV. SIR: In your letter of the 16th inst., published in THE TRIBUNE, you furnished certain references to authorities for the statement which you had been called upon to prove, and you said that if more were desired they would be given. As soon as I saw your letter I wrote asking you to publish all the evidence you could find, so that the whole matter might be dealt with at once; and I also requested that you would not put me off with mere references, but print your authorities *in extenso*, that our readers might be able to follow us intelligibly, and that I might not hold you responsible for anything less or more than you intended to quote. But as the letter signed Historicus had contained much more in the way of evidence than yours did, and as the quotations in it were given at full length, I thought it would save time and trouble if you would assume it as your own. This suggestion was made, Right Reverend Sir, not from any desire to embarrass you, but the contrary. I wished to draw the correspondence to a close, and considered this a good way of saving time and preventing your being unnecessarily troubled. And I felt that I could make the suggestion fairly, but those who agree with you as to the general question, seem to regard the letter of Historicus as satisfactory, in fact as unanswerable.

Up to this time you have made no reply whatever, and as it is very important that the question between us should be decided without further delay, I feel at liberty to act on the supposition that you have nothing further to say. I proceed, therefore, to examine your case as it is presented in your two letters, and in that of Historicus. As to the document last mentioned, I wish it understood that its being noticed at all is due only to my earnest desire to avoid even the appearance of unfairness. I do not want you to lose the benefit of anything that will strengthen your case; but as you are the only person with whom I have any debate, and as no good effect can be produced by controversy with an anonymous disputant, I must regard you as responsible for whatever is thus admitted on your side. I offer here *in limine* an explanation which, it is hoped, will prevent any one making the objection that I have desired to impose upon you terms to which I do not bind myself. Your statements and authorities being the subject of discussion, it is necessary that they should be set forth plainly and in full. It is not so necessary in the other case. I shall have to make many references, and if all were printed at length, our readers would be wearied, or, what is even more likely, THE TRIBUNE would refuse to publish my letters. Consequently I shall give a reference where that ought to suffice, and a full quotation when it seems to be required. And now, Sir, to the point at issue.

Your assertion was that "*for many years* after the beginning of the Reformation Presbyterian divines were received in England and admitted to parishes without reordination," and, as your warrant for saying so, you point to "Peter Martyr and Martin Bucer, who held seats as Professors of Theology in the Universities of Oxford and Cambridge." But did it not occur to you, Right Reverend Sir, that even if these were cases that would justify what you said, you had not so stated them as to make their connection with it evident. It is not to be supposed that all your readers know enough about Martyr and Bucer to supply out of their own knowledge the defect of your reference. It was incumbent upon you, then, first to show that these men were "Presbyterian divines" in the sense of having had only Presbyterian ordination, and then, second, to give the names of the parishes to which they were admitted, and of the persons who appointed and licensed them. You have furnished to nothing of this kind, Sir; and so that which you added your general assertion, as if it were a sufficient vindication of it, proves useless. Your case breaks down in the very first stage. I might here dismiss the allusion to Martyr and Bucer, and pass on to the examination of your second letter, but that our readers may see how willing I am to give proper attention to everything that even looks like evidence, I will devote some space to this.

It is very clear, Sir, that you believed the Reformers you mentioned were only "Presbyterian divines," but when you undertake to substantiate an assertion, you should not entail upon yourself the trouble of proving your proof. In the opinion as to the ecclesiastical standing of Martyr and Bucer you are not alone. The Rev. R. H. Newton published in Philadelphia in 1858 a sermon in which he referred to them as Presbyterians and said they were "wholly without Episcopal ordination," but at that part of his discourse the reverend gentleman forgot his text, which was "Prove all things!" Others have dealt with these names in the same manner, asserting confidently, but giving no authority. Here then are the facts: The men you mention were both canonically ordained priests. Their right to minister in word and sacrament was precisely the same as that possessed by John Huss and Martin Luther.

Peter Martyr Vermillis, born in Florence A. D. 1500, entered the Order of St. Augustine at Fiscoli; thence he went to Padua, and spent eight years in the monastery there. He was then appointed Abbot of Spoletto, afterward Abbot of "St. Peter-ad-Aram," Naples, and then Prior at Lucca, "an honorable situation which invested him with Episcopal powers." After being a noted preacher for 16 years, he renounced his allegiance to Rome.

Martin Bucer, born in Alsace A. D. 1491, was a "Jacobin" or Dominican friar, a man of great learning and prominence. He was for a time chaplain to the Elector Palatine. Having in 1521 heard Luther defend his own doctrines, Bucer was favorably impressed, and two years afterward he joined the Reformers. (See D'Aubigne's History of the Reformation, I vol., Edinburgh edition, 1847, page 120; McCrie's Reformation in Italy, page 117, &c.; Middleton's Evangelical Biography, Vol. I.)

Such then, Sir, were the men of whom it is said that they were "wholly without Episcopal ordination." And yet, if such were the *fact*, you could not find in their case any warrant for your assertion, for these men were never admitted to parochial cures in England. You say they held seats as Professors at Oxford and Cambridge and this is granted—but what then? Do you maintain that a professorship and a parish are one and the same thing? If not, what is your reference worth? Striving to defend you on this point, Historicus raises new questions. He says: "Dr. McCosh is no less a true minister because he presides at Princeton, nor is the office of Dr. Wm. Sparrow at Alexandria Seminary below that of the Rector of St. James, Bristol." To this I reply that the man who is a "true minister" does not lose his ecclesiastical character by becoming a Professor or President of a college, but the fact of a man's being Professor or President does not prove that he is a true minister," still less does it prove him the rector of a parish. The other instance is just as little to the purpose. The venerable Dr. Sparrow holds an office that may be considered much more important than that which I unworthily fill, but he is not *ex officio* a parochial minister. And permit me to remind you, Sir, that that is what you must prove Presbyterian divines to have been in the Church of England. If your statement had been that the English Government gave employment in the Universities to certain European reformers, or that a professor's chair and a parish are identical, or that a professor of divinity is a more important person than a mere working presbyter, verily, Sir, I should not have wasted my time and yours in discussing it.

Historicus seems ready to yield the point concerning Martyr and Bucer, when he says they "may not have engaged in pastoral work during their stay in England." But if not, what have they to do with your assertion, which they were introduced to justify? Still he tries to prove that they did exercise themselves in the special work of the Christian minister, and for this purpose gives two quotations. (1.) Peter of Perugia, writing from Cambridge to Bullinger, said that they were "actively laboring in their ministry." (2.) The Martyr Bradford, in his farewell to Cambridge, said, "Remember the readings and preachings of God's true prophet and preacher, Martin Bucer." It was probably this passage in Bradford's Remains that led the Rev. Dr. Tyng to say, in his "Letter to Bishop Potter," in 1865, that divines of the Continental Reformation were by the English Church "invited to teach and minister in her Universities and among her people." Will it surprise you, Sir, if I assert that the quotations thus made by Historicus can give you no support? Here are the reasons: First, the Zurich letters were written in Latin, and as that language contains no word specially signifying the work of the Christian ministry, it is clear that the word in the translation means no more than "office" or "function." The nature of the service rendered would determine the exact sense of the word. It is clear that in this instance it was not the same as we now understand it. The words "preaching" and "preacher" come nearer to the point, but "professors" or "readers" in divinity were often spoken of "preaching the divinity lecture." And in fact they and even doctors in divinity have, in virtue of their office or degree, really preached in the universities, though laymen. Of this I can adduce one instance, at least, which shows that even permission to preach in the University did not involve a recognition of full ministerial character. But further, this liberty, being peculiar to the great universities, would not warrant the taking of a similar liberty in the Church. Yet even there at the beginning of the Reformation, owing to the dearth of men having the requisite orthodoxy and knowledge, it was permitted to at least one pious and scholarly layman to preach, so that if the delivery of sermons *coram populo* could be proved in the case of any purely Presbyterian Reformers it would not necessarily involve recognition of them as "true ministers." But nothing of the kind can be shown in any such case. The lectures or discourses of Martyr and Bucer were delivered in the universities, and to the members only. That they were not addressed to the people is evident from the fact, which you and your friends seem to have forgotten, that the continental divines had no knowledge of the English language. Their "preaching" was simply the reading of an expository lecture in Latin.

Thus, then, Sir, I have fully sifted the evidence offered in your first letter, and what Historicus advanced in support of it. Your assertion was that *Presbyterian divines as such were for many years admitted to parishes in England, and you have endeavored to prove this by pointing to men who were* NOT *Presbyterians and who were* NOT *admitted to parishes!*

It is hoped that this will not be regarded as a sample of the logic which prevails among Episcopalians.

In my next letter I shall examine your second, dated 16th inst. I have the honor to be, Right Reverend Sir, yours respectfully, J. H. DRUMM.

Bristol, Pa., Oct. 29, 1873.

THE SCRIPTURES APPEALED TO.

To the Editor of The Tribune.

SIR: I have watched with much interest the controversy that has been carried on in your paper concerning the action of the Dean of Canterbury in assisting at the celebration of the Holy Communion during the recent Convention of the Evangelical Alliance. It is not surprising that a majority of the letters are opposed to the Dean, although there is little doubt that a large proportion of the Christian people of this country are in sympathy with him, when it is remembered that a minority is always most eager to be heard. The line of attack seems now to have diverged from the Dean, and to have turned against Bishop Cummins of Kentucky, against whom assaults have been made, little moderated by that Christian charity, the lack of which by no means strengthens the position of his assailants.

Dr. Drumm, for instance, first asks for the Bishop's authorities; second, after failing to see his reply, sternly refuses to recognize any one else in the controversy, and lastly, complains that the Bishop does not recognize others, inasmuch as he does not quote his authorities *verbatim et literatim*. As far as Dr. Drumm himself is concerned he cannot but be acquainted with the authorities from which Bishop Cummins quotes. Could anything be more inconsistent?

Again, this morning, one could but be pained at the insinuation in "Old Catholic's" letter that the Bishop was simply seeking for notoriety; an insinuation which it is useless to answer, for a simple denial would have little effect upon his detractors, and is not needed by his friends.

But to leave for a moment this discussion as to church authority, Why should we confine ourselves to a lower when the highest authority is at our elbow? Why quote the prayer-book when the Bible is open before us? And much should I like to ask for any authority from the Holy Scriptures denying the right of disciples of "The Master" to hold communion the one with the other. Can it be given? Nor do we leave the point at issue in such a question, for the laws of the Episcopal Church claim to have been founded on the Word of God, and no churchman will object to go far back of the "Reformation" to the very teachings of our Lord himself. If the church be the Body, she cannot disregard the Head. If her laws and government be apostolic, she cannot shrink at having them placed side by side with the Apostles' teaching in the open Word of God, and happily, we do not now refer the readers of THE TRIBUNE to a book or an authority unattainable to the masses. Thank God, His word is within the walls of every Christian home. So we repeat the question, Is there authority in the Bible denying the right of intercommunion of all Christians? In proper time it would not be difficult to prove the contrary; but now the burden of proof is with the other side, and if it fails, as fail it must, every Christian heart will cry spontaneously, "Let God be true, but every man a liar." If the Church be opposed to Scripture, the Church herself must bow.

The line of argument now reminds one very much of the fierce discussions at the time of the Reformation. "The Fathers of the Church say thus," cry the Roman Catholics. "The Bible says the contrary," rejoins Luther and his coworkers.

As regards the other question in dispute—"Are ministers of the Episcopal Church alone capable of administering the Lord's Supper?"—take it to the same test—the Bible—and, if no authority for such a statement be found there, let Bishop Cummins's assailants hold their peace. One who cherishes the name of Christian even far more than that of CHURCHMAN.

New-York, Oct. 28, 1873.

PROOFS WANTED.

To the Editor of The Tribune.

SIR: Has Bishop Cummins left his defense in the hands of his friends, or abandoned it altogether? Many have been looking, day after day, for the expected proofs, alleged by the Bishop to be so decisive, of the recognition of Presbyterian ordination by the Anglican Church. The Bishop would do good service to doubtful minds by furnishing at once to the public press such evidence as will prove the correctness of his assertions respecting the validity of non-episcopal orders, and of his blamelessness in taking part in the administration of the Communion in a Presbyterian church and in the Presbyterian mode.

Bishop Cummins has exhibited great confidence in his ability to defend the position he has taken; but he certainly will not inspire a similar confidence in the public mind by delaying much longer a fair and full vindication of his theory. Some, perhaps, may come to think that the Bishop's movements have been more rash than wise, and that the prayer-book and canons of the Episcopal Church are rather obstructions in the way of his brotherly enterprises. At all events, let the Bishop come forward with his proofs, and thus relieve the minds of many who, if not actually suspicious, are, to say the least, rather IMPATIENT.

New-York, Oct. 30, 1873.

PARIS GOSSIP.

ANNOYANCES OF WOMEN ON THE BOULEVARDS—INCIDENTS IN THE LIFE OF NELATON—THE FUNERAL.

[FROM AN OCCASIONAL CORRESPONDENT OF THE TRIBUNE.]

PARIS, Sept. 26.—When a pretty woman goes out alone in the streets of Paris the chances are that she will be accosted by some gallant, especially if she loiters to look in at the shop windows. There is exemption in a homely face and forbidding exterior; also age. To the pretty young American this is one of the greatest drawbacks to her enjoyment, accustomed as she is to out-of-door freedom and to attack the rude sex rather than to be attacked by it. Thus, that serpent, man, prevents our daughter of Eve from wandering through her Paradise. Freedom from the annoyance may be purchased at the price of green goggles and cork-screw ringlets; but the price of liberty in such a case is exorbitant and not to be thought of. An exasperated beauty, the other day, said that "man is a hateful creature anyhow, and it's a pity we cannot do without him," and all those who have been subjected to the same street attacks doubtless repeat the same thing in chorus. There is safety only in being convoyed; the pretty woman must put herself under the flag of the woman-of-war called the *bonne*, for this flag is recognized and respected by all the piratical cruisers about the streets lying in wait for booty. And as the American woman is superior to any other in personal attraction, she stands more in need of protection than any other. It would be well, therefore, when she comes to Paris, to recognize existing institutions and procure a *bonne* of moral aspect, and of sufficient patience to wait by the hour while her mistress goes through the *Bon Marché* and the *Palais Royal*.

Dr. Nélaton, who has just died, was at the head of the surgeons in France. He had lingered for several weeks, and suffered a good deal. He knew of his condition during this time, and often repeated the remark, "Death is long in coming." During the few days before his death he received three letters from the ex-Empress and her son, dated at Chiselhurst, and he read each of them several times. The last letter of the Empress contained the following postscript; "I reopen my letter to tell you that the Prince, before leaving for Woolwich, begged to be remembered to you." The night before his death he said to his son, "Do as much good as you can in life—above all, without noise." The first phrase in his will is thus written: "I desire that my wife shall bring up my son to respect religion, honor, and work." His codicil expressly requested that no discourse should be pronounced over his tomb, and that the funeral should be as simple as possible. By taste, and somewhat through vanity, he avoided a display of instruments in his operations; he called it "surgery with a big orchestra." He had a small, dry hand, with pointed fingers and a long thumb; this hand was his principal instrument. His coolness equaled his dexterity. "When you have a correct diagnosis, you know where you are going, and you don't risk anything," said he. One day, after homeopathy had secured a foothold in France, a doctor of that school, rubbing his hands with exultation, said to Nélaton, "You see, we are gaining ground every day." "Yes—in the cemeteries," added he. The Emperor said to him, when he cured his son in 1867: "I thank you, Monsieur Nélaton; you have saved my son." "I am glad of it, sire," was his answer, "for I have at the same time saved my reputation." Dupuytren, the greatest genius in the science of surgery of modern times, was his master. The pupil did not equal the master, but he had a greater number of clients among distinguished people. He was a hard worker, and gifted with a rare intelligence. He possessed, too, a certain talent for elocution which tempted him to compete for the professorship of the surgical clinic. He failed the first time, in 1850, but the second time, in 1851, he won, and the occasion was memorable on account of the number and character of his competitors. The faculty of the college had reason to congratulate itself on having attached him to the institution. His teaching was brilliant, and he drew around him a numerous following of studious young men. His successes in the hospital, the certainty and the precision of his diagnosis, his sure judgment and astonishing dexterity, all joined to much gentleness of manner toward patients, soon created for him a great reputation. He became the surgeon of Louis Napoleon; extracted the ball from Garibaldi—the story of which is now legendary—and honors reached him from all sides. Clients came to him in such numbers that he was obliged to give up his professorship. Soon after he was made Senator and Grand Officer of the Legion of Honor; Royer, Michel Lévy and Ricord being the only other physicians who have received this honorable distinction. Science is indebted to him for some modifications in operating. He has given his name to a process for setting the shoulder, and another for the elbow, also to one called the *taille de Nélaton*. The rigors of the siege of Paris contributed to his death, and he finally succumbed to an organic disease of the heart from which he had long suffered. I saw the cortege pass on the Boulevard des Italiens, bearing the remains to Père La Chaise; a battalion of soldiers escorted the hearse as a guard of honor to the grand officer of the Legion of Honor. The pall-bearers were members of the Academies of Science and of Medicine. Many distinguished men were in the procession, most of whom were Bonapartists, the deceased having been identified with that party as much from accident as aught else, for he disliked politics

GENERAL NOTES.

Judge Pitman of Massachusetts recently refused to naturalize a man who had been convicted of selling liquor. He said there were enough liquor sellers now without adopting more.

We are sorry for the Dartmouth College boys. They have been printing a magazine called *The Anvil*, which has been suspended for want of patronage. *The Anvil* has been fairly beaten.

A spiritual medium lately distinguished herself in Illinois by informing a patient that the rheumatism would soon leave his left limb, which happened to be a patent army leg presented to him by a grateful country.

One of the most ingenious devices of modern times is that of a young lady in Troy who, when she has occasion to travel in a street-car, always carries a saw-dust baby. All the men, who were babies themselves once, hasten to offer her a seat.

Charles D. Cunningham committed suicide at New-Bedford, Mass., Oct. 14, in the most unromantic manner. He attached a heavy spittoon to his neck, and jumped overboard. Even $5 worth of coppers in his pockets would have been more noble and dignified.

Any little indication of a return to specie payments is pleasant. A young man of Evansville, Ind., who has long been troubled with a cough, the other day coughed up a gold dollar, and has felt better ever since. The effect upon the money market of Evansville is not stated.

The appetite of a child is as catholic as it is excellent! A baby in New-Bedford has won immortal renown by swallowing 37 buttons (four of them brass), an iron sewing-machine nut, a gold sleeve button, and a thimble; and yet the pretty pledge still lives—a prosperous baby!

A church may be so poor as to render it necessary to let the cellar of the sacred edifice for secular purposes; but some taste and judgment should be exercised in selecting a tenant. The lower region of a temple in Dixon, Ky., is used for a pig pen, and the devotions of the congregation are sometimes disturbed by a great scraping of backs on the floor joists.

All kinds of fruit are on an impressive scale in California including aerolites. One of these heavenly productions lately came whizzing down through the trees at Marysville with an impetus sufficient to bury it eight feet deep in the astonished ground. It took an hour to dig it up, and even then it was so hot that it set fire to the cart in which it was conveyed to the town.

As the little town of Groveland, Mass., is just as likely as any other to be burned, as there are no reservoirs in the town, as the solitary fire-engine there is an antiquated non-suction machine, as it is very hard to get water out of it when it has with difficulty been filled, the Grovelanders, who do not wish to perish by combustion, are thinking of moving in the matter. They had better move soon.

The noise of vehicles in the street is a recognized nuisance to the invalid and the nervous. The English Society of Arts has recently awarded prizes to four styles of public carriages, constructed with special reference to the avoidance of all unnecessary noise. By an ingenious use of list and India rubber the doors and windows of the vehicle are rendered incapable of making any racket whatever.

Our readers will remember the New-Sweden colony in Maine. We are happy to announce that the Scandinavians in America are prosperous in all things. There has been the beautiful number of 71 babies born in New-Sweden since the colony was founded. There are now 192 school children between the ages of 4 and 20, and 80 young unmarried men in the township. So all the quivers seem to be full.

The people of Wrentham, Mass., celebrated their Bi-Centennial, the other day, under great difficulties. In the first place, it rained cats and dogs. Then the pavilion blew down and spoiled the dinner. Then the big chimney of a straw shop followed the example of the big tent. It was a dismal affair throughout, but the Wrentham folks hope it will not rain and blow when the day of the next Bi-Centennial comes.

The thousandth anniversary of the first settlement of Iceland is to be formally celebrated next year. It was Ingolf, a banished subject of the Norwegian King Harold Harfager, who went to Iceland with his foster-brother Leif and built the first dwellings on the island. Greenland was discovered from this island, and thence went the Northmen, who in the year 1000 stepped upon the coast of Massachusetts.

How many a boy has burned to shoot a bear! How many boys have, after a proper preparatory course of reading, shot bears in the abstract! How many will envy the great good fortune of young Ole Jacobsen of Pelican Rapids, Minn. This noble youth discovered a larcenous bear in his father's corn and destroyed him by sending a rifle ball into his spinal column. The beast weighed 226 pounds dressed, and by the generosity of this thoughtful child everybody in the neighborhood has had bear's meat for dinner.

If spirits must come to this world to bother us, the least they can do is to be cheerful, and confine themselves to the gentle rat-tat upon the enchanted table. A house in Portland, Me., has a dreadful nuisance in the shape, or rather sound, of a Groaning Spirit. This unpleasant visitant groans upon the second story under the floor, where he is safe from arrest. We need n't say that the lady of the house is a Spiritualist, and it is her opinion that the Groaner is a relative recently deceased. She remembers him in the flesh.

Mr. Lyman Cooley, of Southwick, Mass., has been disappointed in love, as better and worse men have been before him and will be till love shall be no more. Mr. Cooley wished to impress the object of his passion with the idea of his exceeding desperation. He began, therefore, to take small doses of laudanum. He continued to take small doses for a week, but the rocky-bosomed beauty remained obdurate. Then he tried arsenic in doses large enough to make him sick, and at the last accounts he was a trifle unwell, and the lady still unrelenting.

A melancholy story this from New-Hampshire. William A. Wheeler, who committed suicide in that town lately, was in the war of the Rebellion, and was a pensioner. The selectmen put the body, after it was recovered from the river, into a rough box, and buried it beside the graves of two little daughters of the deceased. No one, not even a member of the "Grand Army," was present, and the newspaper tells us that Wheeler was buried "without benefit of clergy," which shows rather an odd idea of what that ancient legal phrase really means.

A singular and unrecognized disease has just caused the death of a girl in Shoreham, Vt. The patient was completely paralyzed—could not even move her little finger—and all her hair, including her eye-brows, came off, a thick incrustation forming over her entire body. This was snow white, and regularly every month would drop off, leaving the skin white and tender. The new incrustation, however, returned within 24 hours. All this time the appetite remained good, and the patient suffered very little pain. None of the attendant physicians ever saw, read, or heard of such a case.

New-Bedford, Mass., has long been known as a rich little city, and now it stands preëminent for prompt payment of taxes. At the last time for payment, some weeks ago, the Collector for three days received a tax every 36 seconds, during the time the office was open. Ninety-five per cent of the taxes for the year were paid within the time during which a discount is allowed. There is no statement made of the amount of grumbling which accompanied this prompt disbursement, but it is evident to us that the men who thus swiftly paid up wished to get the confounded thing off their minds, and have done with it forever.

Mr. Cornelius Macklin, a trimming manufacturer of Bethnal-Green, England, has peculiar ideas respecting business. Feeling that it would be rather pleasant to see a little boy about his house, he calmly walked into the shop of Mr. Thomas Gully, whalebone preparer, and laying the generous sum of five shillings on the counter, picked up and made off with the infant son of the said Thomas. The magistrate ordered the amiable Cornelius to find bail for six months, and severely observed that "when persons like the prisoner believed that in England they could buy a child, it was a proof how much education was wanted."

An extraordinary case of family jars was lately investigated in the Police Court of St. Paul. First a father-in-law, Frederick A. Kiehl, sr., was charged by his daughter-in-law, Barbara Kiehl, with cruel treatment. This father-in-law seems to have been worse than any mother-in-law on record. He resided in his son's family, and promoted domestic harmony by beating his daughter-in-law, pulling her hair, and otherwise abusing her. The mother-in-law also lent her valuable assistance. The example was contagious. Poor Barbara's husband began to beat his wife, and occasionally threatened to chop her head off. There was a general fining and giving of bonds to keep the peace.

A money-saving old and single lady was Mary Ann Russell, in Edgemont, Delaware County, Penn. After she left for loftier regions, her relatives who knew how fond she was of her little moneys, searched her domicile in vain for hidden treasure. Finally they put her effects up at auction, and, among other chattels, disposed of an old bureau. It was concluded to take one more look at this receptacle before sending it away, and patience and persistence were rewarded. On a small ledge upon which a small upper drawer moved the delighted explorers found wrapped in packages, $283 in gold, $17 70 in silver, $65 in greenbacks, one ring, and one breastpin—the painfully accumulated and carefully concealed acquisitions of Mrs. Mary Ann. There is no way, of course, of finding out how much money is thus secreted and never found, but we suppose the gross amount must be considerable.

There is a dealer in ardent spirits in the town of Crockett, Texas, who has not only astonishing sanitary views, but extraordinary notions of the English language. He begins his advertisement by exclaiming: "The Alarum has been sounden," by which he means that a "single sporadic case of fever" has caused great numbers of panic-stricken citizens "to rush fanatically from our city as if it was stricken with a decimating plague," which finds a precedent only in Sacred History when the Israelites departed from Egypt." "But suppose," he reasons, "yellow fever did appear in a distinctive form, how can it become epidemic in a city where such antidotes are at hand as my pure liquors, spreding like a sanitary disinfectant over all the surrounding country!" We only wonder the man did not announce his Whisky as the old original Elixir of Immortality.